In the Claims

Please amend claims 29, 38, 45, 46, 72-74, 78, 79, 81, 82, and 84-89 and add new claims 100-112 as follows:

~~29~~. **(Four Times Amended)** A metering apparatus, said metering apparatus measuring the delivery of electrical energy from an energy supplier to a consumer through a first electric circuit, said metering apparatus comprising:

a revenue meter enclosed within an enclosure;

an I/O device physically separate from said enclosure;

an interface link operative to couple said I/O device to said revenue meter;

said I/O device further comprising a processor; said processor operative to provide at least one first timer value to said revenue meter; and

said I/O device further comprising at least one I/O port.

~~38~~. **(Thrice Amended)** A method of operating a metering apparatus, comprising:

measuring the delivery of electrical energy from an energy supplier to a consumer through an electric circuit using a revenue meter, said revenue meter enclosed within an enclosure;

locating an I/O device external to said enclosure of said revenue meter;

providing at least one I/O port on said I/O device;

wherein the I/O device includes a processor; and

providing at least one first timer value from the processor to said revenue meter.

~~45~~. **(Amended)** The method of claim ~~38~~ further comprising:

accommodating connection of at least one communications signal from said revenue meter on said I/O device.

~~46~~. **(Twice Amended)** The method of claim ~~45~~ further comprising:

communicating at least one communications signal from said revenue meter via an interface link.

~~72~~. **(Thrice Amended)** A method of operating a metering apparatus, comprising:

measuring the delivery of electrical energy from an energy supplier to a consumer through an electric circuit using a revenue meter, said revenue meter enclosed within an enclosure;

locating an I/O device external to said enclosure of said revenue meter;

wherein the I/O device includes a processor;

wherein the I/O device comprises at least one I/O port;

connecting an interface link between said revenue meter and said I/O device;

communicating at least one I/O signal between said I/O device and said revenue meter via said interface link; and

providing at least one first timer value from the processor to said revenue meter.

73. **(Amended)** The method of claim 72 wherein said I/O signal is indicative of the amount of current flowing into at least one input of said I/O device.

74. **(Amended)** The method of claim 72 further comprising:

generating a signal level corresponding to said I/O signal.

78. **(Amended)** The method of claim 72 further comprising:

accurately timestamping transition times of at least one input of said I/O device.

79. **(Amended)** The method of claim 72 further comprising:

detecting errors in said communication.

81. **(Amended)** The method of claim 72 further comprising:

receiving power by said I/O device from said revenue meter.

82. **(Amended)** The method of claim 81 further comprising:

accurately timestamping transition times of at least one input of said I/O device.

84. **(Amended)** The method of claim 72 further comprising:

expanding said interface link to couple to at least one additional I/O device.

85 **(Amended)** The method of claim 84 further comprising:

controlling the application of power to said I/O device with a second processor in said revenue meter.

86 **(Amended)** The method of claim 84 further comprising:

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sending at least one second timer value from said processor on said I/O device to said revenue meter, said at least one first timer value indicative of the time of transition of at least one input of said I/O device, and said at least one second timer value indicative of a time of transmission of at least one communications packet from said I/O device to said revenue meter.

87 **(Amended)** The method of claim 81 further comprising:

controlling the application of power to said I/O device with a second processor in said revenue meter.

88 **(Amended)** The method of claim 72 further comprising:

controlling the application of power to said I/O device with a second processor in said revenue meter.

89 **(Amended)** The method of claim 72 further comprising:

sending at least one second timer value from said processor on said I/O device to said revenue meter, said at least one first timer value indicative of the time of transition of at least one input of said I/O device, and said at least one second timer value indicative of a time of transmission of at least one communications packet from said I/O device to said revenue meter.

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100. **(New)** The metering apparatus of claim 29 wherein the at least one first timer value comprises a first free running timer value.

101. **(New)** The metering apparatus of claim 29 wherein the at least one first timer value comprises a first free running counter value.

102. **(New)** The metering apparatus of claim 29 wherein said processor is further operative to send at least one second timer value to said revenue meter, said at least one first timer value indicative of a time of transition of at least one input on said I/O device, and said at least one second timer value indicative of a time of transmission of at least one communications packet from said I/O device to said revenue meter.

103. **(New)** The metering apparatus of claim 102 wherein the at least one first and second timer values comprise free running timer values.

104. **(New)** The metering apparatus of claim 102 wherein the at least one first and second timer values comprise free running counter values.

105. **(New)** The method of claim 38 wherein the at least one first timer value comprises a first free running timer value.

106. **(New)** The method of claim 38 wherein the at least one first timer value comprises a first free running counter value.

107. **(New)** The method of claim 72 wherein the at least one first timer value comprises a first free running timer value.

108. **(New)** The method of claim 72 wherein the at least one first timer value comprises a first free running counter value.

109. **(New)** A metering apparatus, said metering apparatus measuring the delivery of electrical energy from an energy supplier to a consumer through a first electric circuit, said metering apparatus comprising:

a revenue meter enclosed within an enclosure;

an I/O device physically separate from said enclosure;

an interface link operative to couple said I/O device to said revenue meter;

said I/O device further comprising a processor; said processor operative to provide at least one first timer value to said revenue meter;

wherein the revenue meter accurately timestamps transition times of at least one input of said I/O device.

110. **(New)** A method of operating a metering apparatus, comprising:

measuring the delivery of electrical energy from an energy supplier to a consumer through an electric circuit using a revenue meter, said revenue meter enclosed within an enclosure;

locating an I/O device external to said enclosure of said revenue meter;

wherein the I/O device includes a processor

connecting an interface link between said revenue meter and said I/O device;

communicating at least one I/O signal between said I/O device and said revenue meter via said interface link;

providing at least one first timer value from the processor to said revenue meter; and

generating a signal level corresponding to said I/O signal.

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111. **(New)** A method of operating a metering apparatus, comprising:

measuring the delivery of electrical energy from an energy supplier to a consumer through an electric circuit using a revenue meter, said revenue meter enclosed within an enclosure;

locating an I/O device external to said enclosure of said revenue meter;

wherein the I/O device includes a processor

connecting an interface link between said revenue meter and said I/O device;

communicating at least one I/O signal between said I/O device and said revenue meter via said interface link; and

providing at least one first timer value from the processor to said revenue meter;

wherein said I/O signal is indicative of the amount of current flowing into at least one input of said I/O device.

112. **(New)** A method of operating a metering apparatus, comprising:

measuring the delivery of electrical energy from an energy supplier to a consumer through an electric circuit using a revenue meter, said revenue meter enclosed within an enclosure;

locating an I/O device external to said enclosure of said revenue meter;

wherein the I/O device includes a processor

connecting an interface link between said revenue meter and said I/O device;

communicating at least one I/O signal between said I/O device and said revenue meter via said interface link;

providing at least one first timer value from the processor to said revenue meter; and

sending at least one second timer value from said processor on said I/O device to said revenue meter, said at least one first timer value indicative of the time of transition of at least one input of said I/O device, and said at least one second timer value indicative of a time of transmission of at least one communications packet from said I/O device to said revenue meter.--